

VIN STEW- Melvin Butte Forest Management Project

Silviculture Treatment Specifications and Implementation Guidelines

Stewardship Imp Units 1,2,3,17, 20

Updated 10/20/2016

/S/ William Brendecke certified silviculturist

Prescription and Marking Guides herein refer to those units identified in the Melvin Butte EA as “Thinning” or in the case for Unit 17 “Lodgepole pine improvement” and 20 “MCGO”. Thinning (without created openings) approach was chosen for Imp Unit 17, 20 due to presence of existing openings.

Thinning Goals

- 1) Adjust late seral species proportion by thinning
- 2) Favor large old growth development/ maintenance
- 3) Improve growing space for ponderosa pine
- 4) Retain all large tree structure (>25”DBH)

Site Descriptions

	Unit 1	Unit 2	Unit 3	Unit 17	Unit 20
EA Unit crosswalk	28	113	36	44	51
Acres:	30	28	9	43	6
Deschutes LRMP	M-18	M-18	M-18	M-18	M-18
Volland Plant Association:	CWS113	CWS113	CWS113	CWS113	CWS112
Majority Aspect:	90	358	41	356	355
Majority Slope (%):	6	15	13	15	13
Majority Elevation (ft):	5689	5407	5318	5686	5436
BA weighted QMD (in):	10.1	11.5	13.1	44	7.3

Table 1. Existing condition of basal/acre and trees/acre among different size class categories and units.

Imp Unit #	TPA <5" DBH	TPA 5 to 9" DBH	TPA 9 to 21" DBH	TPA >21" DBH	TPA 0 to 8" DBH	BA/acre <5" DBH	BA/acre 5 to 9" DBH	BA/acre 9 to 21" DBH	BA/acre >21" DBH	BA/ acre 0 to 8" DBH
1	4838	504	129	2	5241	110	130	93	7	200
2	2172	304	214	7	2468	27	65	167	20	89
3	510	182	119	16	665	13	44	121	76	45
17	2230	56	146	0	2266	7	18	106	0	16
20	942	102	129	5	1011	10	31	107	16	28

VIN STEW- Melvin Butte Forest Management Project

Silviculture Treatment Specifications and Implementation Guidelines

Stewardship Imp Units 1,2,3,17, 20

Updated 10/20/2016

Unit specific Information

Imp Unit #	Comments
1	A mixed conifer stand containing lodgepole, white fir, ponderosa pine. Past mountain pine beetle has created high fuel load concentrations among white fir, residual lodgepole and ponderosa pine.
2	There is a dramatic stand change from west to east in terms of stand structure and white fir mistletoe and root rot centers. East end resembles Unit 3 while west end resembles unit 20.
3	Stand is relatively intact but contains white fir mistletoe. Large old growth ponderosa pine dispersed throughout.
17	A lodgepole/ mixed conifer transition stand with scattered remnant ponderosa pine
20	Diseased white fir stand with dispersed ponderosa pine and manzanita

Units 1, 3, 17, 20 saw-log marking/ cutting guide

Common elements across units

- 1) No marking/cutting ponderosa pine, Doug-fir, 5 needle pines or hemlock (if discovered)
- 2) White fir, lodgepole pine diameter limit- No marking/ cutting of any ≥ 25 "dbh
- 3) Maintain all snags
- 4) Remove all white fir, lodgepole pine (< 25 "DBH limits) from within 25ft of any 12"+ DBH live ponderosa pine or 9"+ DBH Doug-fir
- 5) With remaining white fir, lodgepole pine- always choose diseased, low vigor, poor form trees for removal first within the bounds of BA/acre ranges presented in below table.
- 6) Species preference (white fir, lodgepole pine) will be equal AFTER #5 is met.

Unit 2 Specific

Identical to the above and below- however entire unit will have a 21"DBH limit (instead of 25"dbh) (fragment area).

Table 2. Unit by Unit level BA range target for these "Thinning" units.

Imp Unit #	Prescribed sqft BA range	Common Elements	
1	60-80	Use the lower range of the basal area target in disease centers including white fir mistletoe or root rot pockets and upper range in areas identified below.	25' spacing off of any ponderosa pine ≥ 12 "DBH or ≥ 9 "DBH Doug-fir (if found)
2	80-120 on east side/ and 60-80 at stand break (west side)		
3	80-120		
17	60-80		
20	40-60		

VIN STEW- Melvin Butte Forest Management Project

Silviculture Treatment Specifications and Implementation Guidelines

Stewardship Imp Units 1,2,3,17, 20

Updated 10/20/2016

Thinning discussion

Thinning will occur throughout the diameter range (9-25" dbh) based on list of "common elements" stated above. However actual (localized) BA ranges will be affected by the presence of ponderosa pine (#4 above) and stand conditions. In disease centers including ABCO and/or PICO dwarf mistletoe shoot for low end of range while in areas free of disease or productive north aspects (slopes >20%) relax range to high end of BA range. See figure below and GIS path→

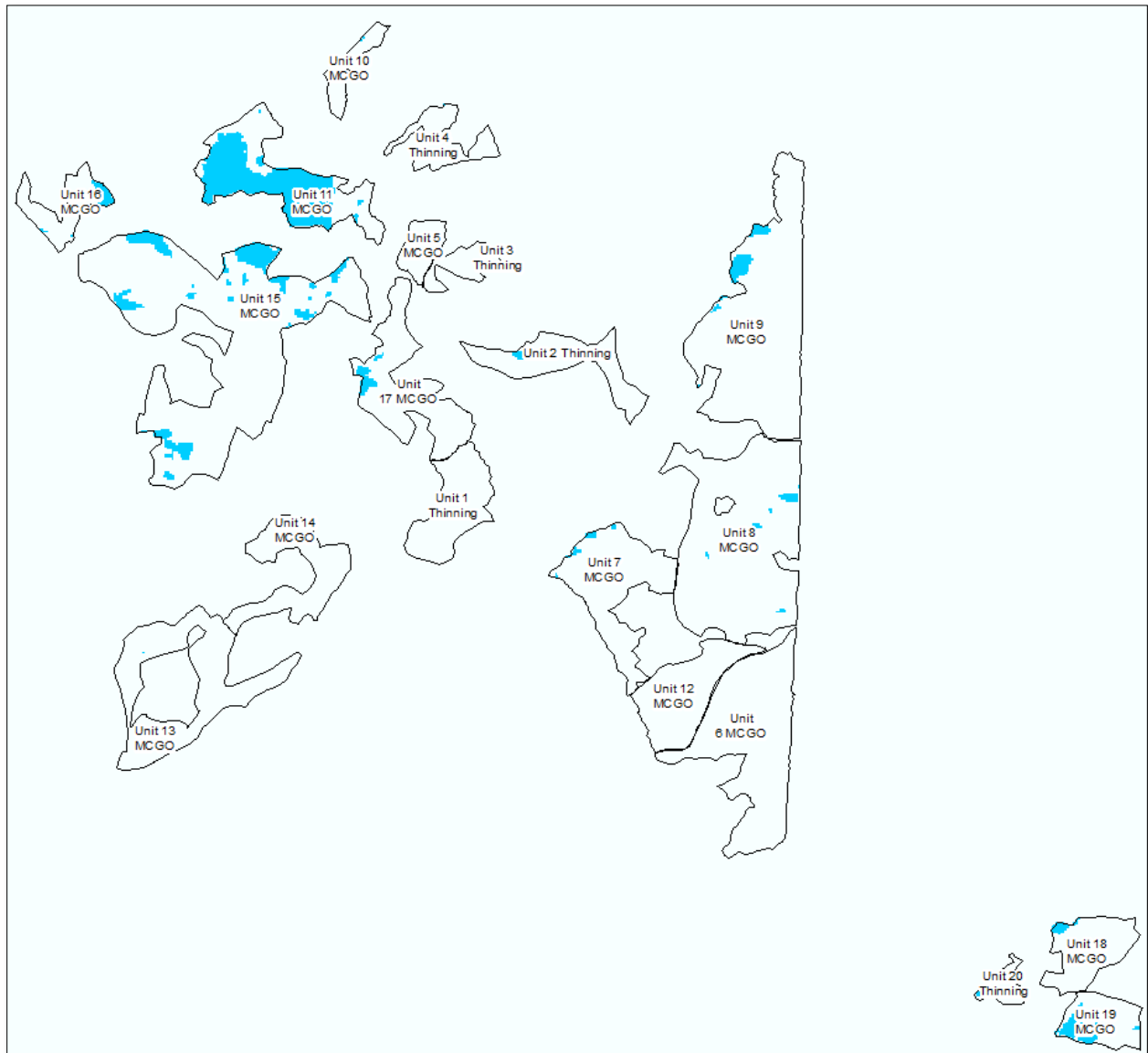
T:\FS\NFS\Deschutes\Project\SIS\impMelvinButte2015\GIS\LayerFile\120sqft_areas.lyr for unit specific areas. The 25' ponderosa pine (and Doug-fir- when/if discovered) clearing may drop local BA ranges below lower end of sqft BA range for the specific unit it is associated which is expected and acceptable.

VIN STEW- Melvin Butte Forest Management Project

Silviculture Treatment Specifications and Implementation Guidelines

Stewardship Imp Units 1,2,3,17, 20

Updated 10/20/2016



VIN STEW- Melvin Butte Forest Management Project

Silviculture Treatment Specifications and Implementation Guidelines

Stewardship Imp Units 1,2,3,17, 20

Updated 10/20/2016

Basal area ranges

Due to the presence of ponderosa pine and/or large white fir, the basal area target ranges presented will not always be met (will be above). Alternatively, there are areas where current BA ranges are already within 80-120sqft range (or below). As such, minimal cutting/ marking will occur in these areas. In both cases this is expected and acceptable.

Down wood-

Within most stands there is abundant down wood from the past mountain pine beetle outbreak and ongoing ABCO dwarf mistletoe/ root/ stem disease interactions.

Non-Saw component

- 1) Retain all ponderosa pine, 5 needle pines, Doug-fir
- 2) Radially thin all 5-9" white fir, lodgepole, hemlock from 25' of any ponderosa pine that obtains a DBH (≥ 4.5 ft tall).
- 3) Outside of #2 above, thin throughout 5-9" white fir, lodgepole and hemlock to 300 TPA (~12ftX12ft spacing)- spacing can vary up to 50% in order to remove diseased trees and favor a uneven and irregular distribution of trees.
 - a. Favor healthy, straight, free of defect, disease free, free to grow trees as retention trees.
 - b. After 3a, species preference among lodgepole pine, white fir and hemlock shall be treated equal. However when all things are equal, retain the largest diameter tree to meet stocking.

Post sale work-

Jack pot burning of slash and small 0-5"DBH thinning. Prescribed fire is planned adaptively and may be delayed until fuel bed is reduced to lower levels by jack pot burning and hand-pile burning.

0-5"DBH thinning- will further density of small ingrowth of white fir, lodgepole pine and hemlock to a 100 TPA rate. Retain all ponderosa pine.